

### **REMARKS/ARGUMENTS**

Claims 1, 2, 3, 4, 6 and 18 have been amended to more clearly define the invention claimed by the applicant. Support for the amendments to the claims can be found in the specification at, for example, page 5, line 5 to page 6, line 2, page 17, line 12 to page 18, line 2, page 26, line 13 to page 28, line 4, and page 34, line 1 to page 36, line 25. No new matter has been added.

The examiner has rejected claims 1-5 and 18-20 under 35 USC 101, second paragraph. Applicant has amended claims 1-4, 6 and 18. Claims 5 and 19-20 each depend from an amended claim. Applicant submits that claims 1-5 and 18-20 now comply with 35 USC 101 and that claims 1-5 and 18-20 are now in condition for allowance.

The Examiner has rejected claims 1, 3-20 under 35 USC 103(a) as being unpatentable over Dunphy (US Patent No. 6,484,182).

Applicant submits that Dunphy describes a technology based on a relational database, the populating of that database with hierarchical information (i.e. part groups and parts), and the eventual publishing/printing of the information (see, for example, Column 3, lines 2 and 3; Column 3, lines 5-30). As previously indicated, Applicant submits that col. 6, lines 8-25 of Dunphy merely discloses the development of predetermined data formats and relationships for a part group and parts within the part group to be stored in a relational database. Applicant submits that Dunphy does not involve specifying correspondence relations from the viewpoints of a plurality of subjects but rather only correspondence relations between parts and the part group to which the part belongs. For example, the part group for a part does not change because of the viewpoint of a subject interested in the part.

In order to further clarify the present invention, in a general sense, embodiments of the invention function as follows. A correspondence relation between attributes determined by respective viewpoints of a plurality of subjects involved in an electronic commercial transaction is specified, based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law. By using cellular decomposition in the Cellular Information Model (CIM), a set of attributes is decomposed into non-empty disjoint equivalence classes according to the equivalence relation. One or more attributes are then extracted as a common subspace satisfying the necessary conditions for concluding the electronic commercial transaction by employing this cellular decomposition operation according to the equivalence relation. Preferably, the extracted attribute is also added to a cellular space corresponding to the respective subjects, by a cell attaching operation in the CIM, by which the common subspace is attached to the cellular space corresponding to the respective subjects.

One of the significant technical features of the CIM is the cellular decomposition by which a set of attributes is decomposed into non-empty disjoint equivalence classes according to the equivalence relation. Since the union of the subsets thus decomposed has no intersection therebetween, it can be confirmed that neither redundancy nor duplication is produced in the event of the cellular decomposition and composition, and therefore the cell attachment can be performed as a linear operation.

Applicant submits that Dunphy does not teach or suggest at least the elements of specifying correspondence relations based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law and extracting and recording of one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by employing a cellular decomposition operation by which a set of attributes is decomposed into non-empty disjoint equivalence classes according to the equivalence relation, as claimed, for example, in independent claim 1.

Still further, Applicant submits that Dunphy does not teach or suggest the further element of reading out and presenting of accumulated correspondence relations at a stage of another electronic commercial transaction as claimed, for example, in independent claim 2.

Still further, Applicant submits that Dunphy does not teach or suggest the further element of adding of the extracted attribute to the cellular space corresponding to the respective subjects, by a cell attaching operation by which the common subspace is attached to the cellular space corresponding to the respective subjects, as claimed, for example, in independent claim 3.

For the reasons described above, Applicant submits that the rejection made by the examiner under U.S.C. 103(a) based on Dunphy has been overcome and claims 1, 3-20 are in condition for allowance.

The Examiner has rejected claim 2 under 35 USC 103(a) as being unpatentable over Dunphy in view of Spiegel (US Patent No. 6,466,918).

For at least similar reasons to those noted above with respect to claims 1, 3-20, Applicant submits that the combination of Dunphy with Spiegel neither teaches nor suggests the combination of elements in amended claim 2. Thus, Applicant submits that claim 2 is in condition for allowance.

Applicant submits that, based on the above remarks/arguments, each of the current independent claims are allowable over Dunphy and/or Spiegel. For at least similar reasons, as well as the additional elements included therein, Applicant submits that the dependent claims are also allowable.

Serial No.: 09/991,953  
Art Unit: 3627

-13-

**Conclusion:**

In view of the foregoing amendments and remarks it is respectfully submitted that this application is in condition for allowance. Favourable consideration and prompt allowance are earnestly solicited.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Ralph A. Dowell / cs". The signature is fluid and cursive, with a horizontal line drawn underneath the name.

Ralph A. Dowell  
Registration No. 26,868

Dowell & Dowell P.C.  
Suite 406  
2111 Eisenhower Avenue  
Arlington, VA 22314

Telephone No. (703) 415 2555  
Facsimile No. (703) 415 2559

Date: 3/25/05

Our Ref: 211310.00007  
NWH/cs